CHANDIGARH UNIVERSITY
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Experiment no-5

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SEMESTER 2ND
DOP – 06/04/2021
BRANCH – B.Tech (C.S.E)
SUB – COMPUTER WORKSHOP

Q What is ROM ? How it is related to secondary memory?

FOUNDINGS-

Read-Only Memory (ROM), is a type of electronic storage that comes built in to a device during manufacturing. You'll find ROM chips in computers and many other types of electronic products; VCRs, game consoles, and car radios all use ROM to complete their functions smoothly. ROM chips come built into an external unit – like flash drives and other auxiliary memory devices – or installed into the device's hardware on a removable chip. Non-volatile memory like ROM remains viable even without a power supply.

Types of ROM

Here's an overview of the different types of ROM, ranging from the most basic to more versatile.

-ROM: Classic or "mask-programmed" ROM chips contain integrated circuits. A ROM chip sends a current through a specific input-output pathway determined by the location of fuses among the rows and columns on the chip. The current can only travel along a fuse-enabled pathway and thus can only return via the output the manufacturer

chooses. Rewiring is functionally impossible, and so there's no way to modify these types of ROM chips. While producing a template for an original ROM chip is laborious, chips made according to an existing template can be much more affordable.

-PROM: Programmable ROM, or PROM, is essentially a blank version of ROM that you can purchase and program once with the help of a special tool called a programmer. A blank PROM chip allows current to run through all possible pathways; the programmer chooses a pathway for the current by sending a high voltage through the unwanted fuses to "burn" them out. Static electricity can create the same effect by accident, so PROMs are more vulnerable to damage than conventional ROMs.

-EPROM: Erasable Programmable ROM chips allow you to write and rewrite them many times. These chips feature a quartz window through which a specialized EPROM programmer emits a specific frequency of ultraviolet light. This light burns out all the tiny charges in the EPROM to reopen its circuits. This exposure effectively renders the chip blank again, after which you can reprogram it according to the same process as a PROM. EPROM chips will eventually wear out, but they frequently have lifetimes of over 1000 erasures.

-EEPROM: To modify an Electrically Erasable Programmable ROM chip, apply localized electrical fields to erase and rewrite the data. EEPROMs have several advantages over other types of ROM. Unlike the earlier forms, you can rewrite EEPROM without dedicated equipment, without removing it from the hardware, and in specifically designated increments. You don't have to erase and rewrite everything to make a single edit.

ROM is a type of non-volatile memory, which means that the data stored in ROM persists in the memory even when it receives no power – for example when the computer is turned off. In that sense it is similar to secondary memory, which is used for long term storage.

EVALUATION COLUMN for Lab MST (To be filled by concerned faculty only)

Sr. No.	Parameters	Maximum Marks	Marks Obtained
1.	Worksheet completion including writing learning objectives/Outcomes.(To be submitted at the end of the day)	5	
2.	Viva voce of of allotted experiment.	5	
3.	Viva voce of MST syllabus.	10	
4.	Total Marks	20	